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ABSTRACT

This study measured pupil and teacher attitudes toward language variation in a bilingual Spanish/English environment; attempted to determine whether teacher attitudes could be changed in workshops dealing with sociolinguistic concepts of speech variation; and attempted to determine whether teacher and pupil attitudes have a relation to pupil achievement in language arts. The subjects were 279 fourth- and fifth-grade pupils and 18 teachers. A matched guise technique was used to measure both pupils' and teachers' attitudes. Pupil achievement was measured by a relative gain score in reading; reading and English grades; and performance on oral proficiency tests. In general teachers and pupils rated standard English higher than other speech varieties, and attitudes were not changed in the workshops. Pupil evaluation of standard English over other varieties was positively related to pupil achievement on some measures. Teacher attitudes toward code-switching seemed to have a negative relation to their pupils' relative gains in reading as measured by objective tests and English grades assigned by the teachers. (Author/AM)

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Stanford Center for Research and Development in Teaching
School of Education, Stanford University
Stanford, California

Research and Development Memorandum No. 146

LANGUAGE ATTITUDES AND THE ACHIEVEMENT OF BILINGUAL PUPILS

Arnulfo G. Ramírez, Edgardo Arce-Torres,
and Robert L. Politzer

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Introductory Statement

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This report is part of the work of the Program on Teaching and Linguistic Pluralism.

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Abstract

This study (1) measured the attitudes of pupils and teachers toward various speech varieties occurring in a bilingual (Spanish/English) environment, (2) attempted to determine whether teacher attitudes could be changed in workshops dealing with sociolinguistic concepts of speech variation, and (3) attempted to determine whether teacher and pupil attitudes have any relation to pupil achievement in language arts. The subjects were fourth- and fifth-grade pupils (N=279) and their teachers (N=18).

A matched guise technique that required subjects to register reaction to the taped voices of the same individuals using different speech varieties, or guises, was used to measure both pupils' and teachers' attitudes. Differential reactions to the guises assumed by the speakers were interpreted as revealing differential attitudes toward the speech varieties. The varieties used in this study were standard English, two types of hispanized English, a mixture of English and Spanish (code-switching), and standard Spanish (for pupils only). The subjects judged the guises on appropriateness for school, correctness, and the speaker's likelihood to achieve in school.

Pupil achievement was measured by a relative gain score in reading (the difference between individual reading achievement scores and predicted scores based on the regression of 1975 over 1974 scores on objective reading tests); the grades in reading and English assigned by individual teachers; and pupil performance on oral Spanish/English proficiency tests.

The results were as follows: (1) In general teachers and pupils agreed in rating standard English higher than other speech varieties. One exception to this trend was a group of teachers involved in a year-long special project, who ranked the achievement potential of code-switchers (pupils using English and Spanish alternately, even in the same sentence) as high as that of speakers of standard English. (2) Attitudes were not changed in the desired direction by the workshops. (3) Pupil evaluation of standard English over other varieties was positively related to the pupils' achievement on some measures. (4) Teachers' attitudes toward code-switching appeared to have a negative relation to their pupils' relative gains in reading as measured by objective tests, as well as to the English grades assigned by the teachers.

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Introduction

It is widely assumed that teachers' attitudes toward pupils influence teachers' expectations and result in a self-fulfilling prophecy concerning the pupils' achievements (e.g., see Rosenthal & Jacobson, 1968). Seligman, Tucker, and Lambert (1972) have demonstrated that speech style, or dialect, among other pupil characteristics, has a strong impact on teacher expectations and attitudes. The forms that attitudes and expectations based on speech style can take have also been scrutinized by various scholars, chiefly Fredrick Williams (1973), whose findings show that teacher attitudes toward pupils' habits of speech can be broken down into two clusters that form judgmental dimensions. One cluster, made up of such adjective pairs as "standard American-marked ethnic style," "white-like--nonwhite-like," "low social status-high social status," and "disadvantaged-advantaged," Williams labeled "ethnicity and nonstandardness." The other cluster was made up of such adjective pairs as "unsure-confident," "active-passive," "reticent-eager," "hesitant-enthusiastic," and "like talking--dislike talking," which Williams interpreted as indexing an overall evaluation of a child's "confidence-eagerness." It is, of course, the latter factor that is often responsible for the prophecy of failure, which then establishes in the teacher's mind this causal link: nonstandard speech → lack of eagerness → low achievement.

The assumption that teachers' attitudes toward language are crucial for educational outcomes has been stated succinctly in a recent book on American sociolinguistics:

> Our experience in working with teachers has indicated that the most crucial contribution that the study of social dialects can make to education is in the area of teacher attitudes. A teacher who has been freed from the opinion that nonstandard dialect is simply distorted English will be a better teacher even without new materials and techniques specifically designed to deal with language variation (Wolfram & Fasold, 1974, pp. 178-179).

The language attitudes of pupils have been investigated by, among others, two of the authors of this memorandum, who found that in a bilingual program pupils rated Spanish higher than hispanized English and standard English, evidently as the result of their exposure to bilingual instruction (Politzer & Ramírez, 1973a).

A hypothesis linking pupils' language attitudes to achievement has rarely been advanced, but one can easily be made since the pupil's view of his own language is assumed to be strongly linked to his self-concept. The hypothesis that low self-concept is directly related to low achievement is, of course, a dominant one in the vast and rapidly multiplying literature that is attempting to explain the low educational achievement of some ethnic groups.

The main purposes of this study are, therefore, the following:

1. To measure the attitudes of teachers and pupils toward specific speech varieties that might occur in a bilingual (English/Spanish) school environment.

2. To determine whether introducing teachers to the concept of bilingual balance and the nature of sociolinguistic speech variation would have any impact on their language attitudes.

3. To determine whether there is any evidence that specific language attitudes held by either teachers or bilingual pupils have a demonstrable link to pupil achievement in reading and English.

Method

Subjects

Eighteen teachers and 279 pupils took part in the study. The subjects were fourth- and fifth-grade pupils and teachers in the Franklin-McKinley School District, San Jose, California, a low-income district. The majority of the pupils in the district come from homes in which the wage earners are unskilled workers. Schools within the district have a great deal of autonomy, although some uniformity in programs exists among schools funded through Title I programs. Classroom organization is predominantly the traditional classroom type. The teacher/pupil ratio in instructional programs is 1 to 28 for the whole district but 1 to 20 in

programs operating under Title I. As will be pointed out below, one group of teachers and pupils taking part in this study took part in a Title I program, the other did not. Spanish-surnamed pupils constitute 47 percent of the total school district enrollment. The pupils in our sample were all Spanish-speaking, although the predominant speech variety among them was code-switching (i.e., an alternate use of English and Spanish in which the change from one language to the other can occur in the midst of a discourse or even within a sentence). With two possible exceptions the teachers were not bilingual, and no bilingual programs were in effect in any of the classrooms of the participating teachers. (The teachers of Group II were, however, simultaneously participating in an E.S.E.A. Title I program on teaching students from lower income areas.)

Procedures

The teachers were divided into two groups: one group took part in a workshop on language variation; the other did not. The second group was included in order to enlarge the sample for the investigation of the relations between teacher attitudes and pupil gains in reading (see below), and between teacher attitudes and pupils' grades in reading and English. Teacher Group I took an attitude test both before and after the two-session workshop; Group II took it only once.

The pupils of the teachers in Group I took the same attitude test as the teachers and, in addition, took a bilingual test of oral language proficiency. They took the attitude measure after the teacher workshop in the spring of 1975, and the language tests were administered by members of the research staff at the same time. The other pupil achievement measures--reading gains and grades in reading and English--were obtained for some pupils of both groups. Grades were from the end of the academic year 1974-75; relative gains in reading were computed from test scores from the end of the 1973-74 and 1974-75 academic years.

The composition of the two groups in the sample was as follows:

	Group I	Group II
Teachers	9	9
Pupils	82	197

Attitude Variables

SCRDT Bilingual Attitude Measure. The language attitudes of both teachers and pupils were measured by a matched guise test of the type first developed and frequently used by Wallace Lambert and his research group (Lambert, Frankel, & Tucker, 1966); similar tests, for pupils only, were used earlier within the context of Spanish/English bilingualism by Politzer and Ramírez (1973 a, b). The test used in this experiment was the SCRDT Bilingual Attitude Measure (Program on Teaching and Linguistic Pluralism, SCRDT, forthcoming). It consists of seven different guises spoken by four adult speakers (two men and two women). The test measures the subjects' reactions to the tape-recorded voices of the same speakers using different dialects (speech varieties). The subjects' reactions to the guises are used as indications of their attitudes. The seven guises are:

I. Standard English.

II. English with hispanized (Spanish accented) phonology and morphology.

III. English with hispanized phonology, morphology, and syntax.

IV. Code-switching between English and Spanish (an alternate use of English and Spanish in which the change from one language to the other can occur in the midst of a discourse or even within a sentence).

V. Spanish which deviates from standard in syntax as well as in phonology and morphology.

VI. Spanish which deviates from standard in morphology and phonology.

VII. Standard Spanish.

A general description of the linguistic variables distinguishing the guises will appear in the teacher's manual being prepared for the SCRDT Bilingual Attitude Measures and goes beyond the scope of this study. However, examples of the scripts used by a speaker assuming the guises may be found in Appendix A. Partly because of time constraints, partly because the teachers who participated in this study had little or no knowledge of Spanish, guises V and VI were not used in this study. The teachers were asked to react to guise I-IV and their pupils to guises I-IV and VII.

The subjects were asked to listen to each speech sample and react to its appropriateness for school, its correctness, and the likelihood of achievement in school by the speaker, and to rate each speech sample on a scale of 1 to 4 in each of these three categories. Every subject heard all four speakers' voices for each guise, and the individual subject's scores on each guise for appropriateness, correctness, or achievement had a potential range of 4 (a score of 1 for each speaker) to 16. The higher the score, the more favorable the subject's attitude.

In addition to scores on the attitude dimensions of each guise, difference scores were used to measure subjects' differential reactions to different guises presented by the same speaker. For example, a subject reacting to Guise I (standard English) with a likelihood-of-achievement score of 15 and to Guise IV (code-switching) with a score of only 10, has a I-IV difference score of 5 for likelihood of achievement. Thus the magnitude of the difference score on each attitudinal dimension can be interpreted as measuring the degree to which one guise is valued over another.

Treatment Variable

Workshop. One of the goals of the study was to determine whether exposure to some facts concerning language variation would bring about a change in teacher attitudes, especially attitudes toward code-switching, which was the predominant language variety of the pupils in this study. We chose to use for the purpose the teacher's manual for the SCRDT Spanish/English Balance Tests (Program on Teaching and Linguistic Pluralism, SCRDT, forthcoming). The exposure to the manual and the workshop in which the manual and the test were explained can thus be considered a treatment variable

Two workshops were conducted: each lasted two and a half hours. During the first workshop, the description, administration procedures, and uses of the Spanish/English Balance Tests were explained to the teachers. Each teacher received the complete test battery and forms for recording the pupils' responses. Examples of pupils' responses in English on the Grammar Production Test (one of those in the battery) were

discussed. Linguistic analysis of responses such as "These chiids eat" and "Today the boys not know the answer" was used to introduce the teachers to bilingualism, standard and nonstandard varieties of English and Spanish, and language attitudes. Each teacher was also given a copy of the teacher's manual and asked to administer two of the Spanish/English Balance Tests to at least five pupils (sample items are shown in Appendix B).

During the second workshop, two weeks later, teachers were helped to make up bilingual profiles for each pupil and for the class. (The test materials include profile sheets, and the teacher's manual explains their use.) These profiles graphically illustrated the concept of relative proficiency in English and Spanish for the individual pupil as well as for the class. Questions related to language variation were further explored.

Achievement Variables

Relative Reading Gain Scores. Since one of the purposes of the study was to determine the influence of teachers' attitudes on student achievement, we wished to measure the relative gains in reading made by each pupil under the guidance of a particular teacher during the school year. The measure was the difference (either positive or negative) between the pupil's 1975 score on the reading section of the California Test of Basic Skills (CTBS) and his predicted reading score based on the line of regression of 1975 scores over 1974 scores. Although the subjects used in this study were at two different grade levels, they were given the same forms of the CTBS test. In interpreting relative gain scores we must keep in mind that they indicate positive or negative distances from a line of regression. In other words, the average relative gain score is by definition zero; a positive score indicates a gain greater than average and a negative score a gain smaller than average. Negative relative gain does not necessarily indicate either a loss or an absence of gain. (The R value of the regression of 1975 over 1974 scores was 0.75.)

Grades in Reading and English. Grades given by teachers for achievement in reading and English were also used as dependent variables for the obvious reason that they could reflect teachers' attitudes as well as

pupil achievement. Final grades for the 1974-75 school year were used.

SCRDT Spanish/English Balance Tests. Two of these tests were used as a third objective measure of the language development of the pupils in the sample. The tests were a Grammar Production Test and a Grammar Multiple-Choice Test.[1] Both had 32 English items and 32 corresponding Spanish items. For the production tasks, pupils were asked to produce an utterance on the model of a key sentence. On the multiple-choice test, they selected one of three possible alternatives to complete an unfinished sentence. (See Appendix B for sample items of both kinds.)

Scores on the Spanish Production, Spanish Multiple-Choice, and English Production tests had no significant relationship to achievement in reading and English or to pupil and teacher attitudes (correlations not shown). Although these scores were not analyzed further, they are included in the various tables as useful information for the reader.

Results

Teacher Attitudes

The mean scores assigned by the teachers to different guises for the attitudinal dimensions of correctness, appropriateness for school, and likelihood to achieve in school are presented in Tables 1A, 1B, and 1C. Correctness is defined here as the degree of conformity to the speech variety generally accepted by teachers in a school environment. Significant differences between mean evaluations of different guises are indicated in the tables by double-line brackets ($p < .01$) or single-line brackets ($p < .05$) between the two means. (T-tests documenting the significant differences are summarized in Appendix C.) These differences indicate the strength of the subjects' preference for one guise over another.

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[1] Test reliability in this administration was as follows:

English Production	Cronbach α = .84
English Multiple-Choice	Cronbach α = .71
Spanish Production	Cronbach α = .96
Spanish Multiple-Choice	Cronbach α = .90

TABLE 1A

Teachers' Mean Scores, Standard Deviations, and Standard Errors for Guises I-IV on the Correctness Dimension

(max. possible mean score = 16)

Variable	Mean Score	Standard Deviation	Standard Error
Group I, Pretest (N=9)			
Guise I	14.56	1.74	0.58
Guise II	8.22	1.79	0.60
Guise III	7.89	2.15	0.72
Guise IV	7.33	2.69	0.90
Group I, Posttest (N=9)			
Guise I	14.22	1.64	0.55
Guise II	8.78	1.64	0.55
Guise III	8.22	1.79	0.60
Guise IV	6.33	2.60	0.87
Group II (N=9)			
Guise I	14.33	1.66	0.55
Guise II	8.89	1.17	0.39
Guise III	7.67	0.87	0.29
Guise IV	8.44	2.74	0.92

| = The difference between the bracketed means is significant at the $p < .05$ level.

‖ = The difference between the bracketed means is significant at the $p < .01$ level.

Note: The size of the significant differences between these mean scores and their t-values are shown in the tables of Appendix C.

TABLE 1B

Teachers' Mean Scores, Standard Deviations, and Standard Errors for Guises I-IV on the Appropriateness-for-School Dimension

(max. possible mean score = 16)

Variable	Mean Score	Standard Deviation	Standard Error
Group I, Pretest (N=9)			
Guise I	14.73	1.48	0.49
Guise II	8.78	1.79	0.60
Guise III	7.56	1.67	0.56
Guise IV	6.78	2.28	0.76
Group I, Posttest (N=9)			
Guise I	14.33	1.66	0.55
Guise II	8.67	1.41	0.47
Guise III	8.33	1.50	0.60
Guise IV	6.44	2.79	0.93
Group II (N=9)			
Guise I	14.56	1.42	0.48
Guise II	8.78	2.33	0.78
Guise III	7.44	2.51	0.84
Guise IV	7.44	2.56	0.85

TABLE 1C

Teachers' Mean Scores, Standard Deviations, and Standard Errors for Guises I-IV on the Likelihood-of-Achievement Dimension

(max. possible mean score = 16)

Variable	Mean Score	Standard Deviation	Standard Error
	Group I, Pretest (N=9)		
Guise I	13.11	1.27	0.42
Guise II	10.22	1.56	0.52
Guise III	10.11	2.03	0.68
Guise IV	9.22	2.68	0.89
	Group I, Posttest (N=9)		
Guise I	13.22	1.39	0.47
Guise II	10.67	1.32	0.44
Guise III	9.89	1.62	0.54
Guise IV	8.89	1.97	0.66
	Group II (N=9)		
Guise I	13.22	1.86	0.62
Guise II	11.11	1.05	0.35
Guise III	9.56	1.81	0.60
Guise IV	11.89	1.36	0.46

The evaluation along the correctness dimension (Table 1A) for Group I teachers show that, on both the pretest and the posttest, Guise I (standard English) is definitely rated higher than the nonstandard guises (II, III) and code-switching (IV). The only difference between the pre and post results is the introduction of some new significant differences in the evaluation of the nonstandard guises relative to code-switching.

The attitude toward code-switching seems to have deteriorated slightly after the workshop treatment; the posttest evaluation of Guise IV is significantly lower than that of guises II and III. Group II teachers (those not involved in the workshop) did not judge the guises very differently from the workshop group. They scored standard English highest by a wide margin, as expected, on the correctness dimension.

The appropriateness judgments (Table 1B) correspond by and large to the correctness evaluations. Standard English is preferred to guises II, III, and IV on both the pretest and the posttest and by both groups. Differences between the pretest and posttest and between the two groups of teachers are relatively minor. The teachers in Group II did not rate code-switching quite as low as the workshop group, just as in the case of the correctness dimension.

Evaluation on the likelihood-of-achievement dimension (Table 1C) shows that Group I teachers rated Guise I as more likely to be associated with achievement in school than all others on both the pretest and the posttest. The only difference introduced by the posttest is a deterioration of the attitudes toward code-switching, which on the posttest is rated significantly lower than accented English. The Group II teachers, however, show a quite different pattern of ratings. Standard English is still rated higher than the hispanized English guises, but the rating given to the code-switching guise is exceptionally high. It is evaluated higher than Guise III, and the difference between the evaluation of code-switching (Guise IV) and standard English (Guise I) is not significant. What caused this significant difference between the teacher groups in attitudes toward code-switching? We cannot offer a certain explanation, but only a suggestion. The teachers of Group II took part in a special Title I Program, offered within the school district, which concentrated on increasing the academic achievement of students from lower income areas; the activities of this program may have either brought about a change in attitudes or attracted teachers with specific attitudinal characteristics.

Pupil Attitudes

The attitudes of the pupils of Group I teachers only were analyzed. The mean pupil ratings of the different guises (i.e., the ratings of each teacher's class), and significant differences between them on each dimension are shown in Tables 2A, 2B, and 2C. (Again, a double-line bracket is used to indicate significance at the .01 level, and a single-line bracket to indicate significance at the .05 level. Tables documenting the significant differences are found in Appendix D.)

Unlike the teachers, the pupils evaluated Guise VII, standard Spanish. They evaluated standard Spanish differently from standard English only on the appropriateness dimension and not with regard to correctness or likelihood to succeed in school. The only interpretation of this finding is that the pupils think the speaker of standard Spanish is likely to succeed in school conducted in Spanish, but unfortunately this attitude has no application to the monolingual English school the children attended.

TABLE 2A

Pupils' Mean Scores, Standard Deviations, and Standard Errors on the Correctness Dimension

(N=74; max. possible mean score = 16)

Variable	Mean Score	Standard Deviation	Standard Error
Guise I	13.24	1.90	0.22
Guise II	7.42	2.05	0.24
Guise III	7.36	1.83	0.21
Guise IV	9.32	2.80	0.33
Guise VII	13.51	2.13	0.25

| = Difference significant at $p < .05$ level.

‖ = Difference significant at $p < .01$ level.

Note: The size of the significant differences between mean scores and their t-values are shown on the tables of Appendix D.

TABLE 2B

Pupils' Mean Scores, Standard Deviations, and Standard Errors on the Appropriateness-for-School Dimension

(N=74; max. possible mean score = 16)

Variable	Mean Score	Standard Deviation	Standard Error
Guise I	13.38	1.78	0.21
Guise II	7.53	2.16	0.25
Guise III	7.32	2.02	0.24
Guise IV	8.46	2.82	0.33
Guise VII	11.85	3.29	0.38

TABLE 2C

Pupils' Mean Scores, Standard Deviations, and Standard Errors on the Likelihood of Achievement Dimension

(N=74; max. possible mean score = 16)

Variable	Mean Score	Standard Deviation	Standard Error
Guise I	13.54	1.70	0.20
Guise II	7.81	2.30	0.27
Guise III	8.10	2.06	0.24
Guise IV	9.55	2.62	0.31
Guise VII	13.26	2.63	0.31

In the evaluation of the <u>correctness</u> of the guises (Table 2A) the pupils seem to have been able to make the "correct" and justifiable judgment that the most hispanized version of English (Guise III) is the least

"correct" guise. (By contrast, their teachers, on the posttest, rated code-switching as the least "correct" guise.)

On appropriateness (Table 2B), the two versions of hispanized English (guises II and III) were again rated lowest. Code-switching (rated lowest by the teachers) was again ranked higher than hispanized English by the pupils.

With regard to the judgments concerning likelihood of achievement (Table 2C), the same pattern is repeated: the hispanized English guises are rated lowest. Pupils agree with the Group II teachers in ranking code-switching higher than hispanized English and disagree with the Group I teachers who put the code-switching pupil either in the same category as the hispanized English speaker (pretest) or at an even lower level (posttest).

Since code-switching is characteristic of the language of the pupils in this study, judgments about the achievement potential of the code-switchers are of particular interest. Both pupils and teachers agree that code-switchers are not as likely to succeed in school as the speakers of standard English, though in the case of Group II teachers the difference is not significant.

Teacher Attitudes and Pupil Achievement

In order to investigate a possible relation between teacher attitude and pupil achievement, three difference scores on the likelihood-of-achievement attitude dimension were found for each teacher: the evaluation of Guise I minus, separately, the evaluations of guises II, III, and IV. The rationale behind this procedure is that the magnitude of the difference score can be assumed to be proportional to the teacher's negative attitude toward guise II, III, or IV relative to standard English. Or, put another way, the difference score is a measure of the degree of preference for standard English. Tables 3A, 3B, and 3C show each teacher's difference score, his group affiliation (pretest scores are used for Group I teachers), the relative gain score in reading for his class, and mean pupil grades in reading and English (grades were measured on a 4-point scale from A=4 to F=1).

TABLE 3A

Teacher Difference Scores I-II on the Likelihood-of-Achievement Dimension and Class Achievement Measures

(N=18)

Teacher Difference Score I-II	Teacher		Relative Gain Scores in Reading[a]			Grade in Reading			Grade in English		
	Number	Group	Pupil N	$\bar{x}$	SD	Pupil N	$\bar{x}$	SD	Pupil N	$\bar{x}$	SD
0	2	I	5	-.34	0.58	15	2.67	0.49	1.	2.80	0.68
0	6	I	2	-.38	0.03	7	2.29	0.76	7	2.86	0.69
0	11	II	7	.01	0.53	17	2.65	0.79	17	2.53	0.80
0	15	II	19	.23	0.69	23	3.00	0.30	23	3.09	0.29
0	18	II	0	0	0	20	3.25	0.72	19	3.37	0.68
1	5	I	3	-.80	0.34	6	3.00	0.63	6	2.50	1.05
1	14	II	9	-.01	0.38	16	2.63	0.62	16	2.75	0.68
1	16	II	16	-.06	0.67	19	2.90	0.46	19	3.00	0.33
2	7	I	2	-.61	0.34	5	2.20	0.45	5	2.20	0.84
2	12	II	11	.67	0.66	16	3.19	0.40	16	3.06	0.25
3	3	I	11	-.33	0.43	15	2.47	0.83	15	2.53	0.83
4	1	I	5	-.27	0.43	11	2.64	0.67	11	2.73	0.91
4	8	I	2	-.16	0.52	11	2.46	0.52	11	1.97	0.54
4	10	II	1	-.48	0	8	2.25	0.46	8	2.13	0.64
5	17	II	20	.06	0.77	21	2.86	0.57	21	2.86	0.48
6	4	I	4	-.33	0.41	7	2.57	0.79	7	2.14	0.90
6	9	I	4	.09	1.16	4	3.00	0.82	4	3.00	1.41
6	13	II	10	-.12	0.53	17	2.65	0.70	17	2.88	0.86

[a]Actual reading achievement score minus predicted score.

TABLE 3B

Teacher Difference Scores I-III on the Likelihood-of-Achievement Dimension and Class Achievement Measures

(N=18)

Teacher Difference Score I-III	Teacher		Relative Gain Scores in Reading[a]			Grade in Reading			Grade in English		
	Number	Group	Pupil N	$\bar{x}$	SD	Pupil N	$\bar{x}$	SD	Pupil N	$\bar{x}$	SD
0	2	I	5	-.34	0.58	15	2.67	0.49	15	2.80	0.68
0	6	I	2	-.38	0.03	7	2.29	0.76	7	2.86	0.70
0	7	I	2	-.61	0.34	5	2.20	0.45	5	2.20	0.84
0	14	II	9	-.01	0.38	16	2.63	0.62	16	2.75	0.68
0	15	II	19	.30	0.69	23	3.00	0.30	23	3.09	0.29
1	11	II	7	.01	0.53	17	2.65	0.79	17	2.53	0.80
2	5	I	3	-.80	0.34	6	3.00	0.63	6	2.50	1.05
2	8	I	2	-.16	0.52	11	2.46	0.52	11	1.91	0.54
2	18	II	0	0	0	20	3.25	0.72	19	3.37	0.68
3	16	II	16	-.06	0.67	19	2.90	0.46	19	3.00	0.33
4	12	II	11	.67	0.66	16	3.19	0.40	16	3.06	0.25
5	3	I	11	-.33	0.43	15	2.47	0.83	15	2.53	0.83
5	4	I	4	-.33	0.41	7	2.57	0.79	7	2.14	0.90
6	1	I	5	-.27	0.43	11	2.64	0.67	11	2.73	0.91
7	9	I	4	.09	1.16	4	3.00	0.82	4	3.00	1.41
7	17	II	20	.06	0.77	21	2.86	0.57	21	2.86	0.48
8	10	II	1	-.48	0	8	2.25	0.46	8	2.13	0.64
8	13	II	10	-.12	0.53	17	2.65	0.70	17	2.88	0.86

[a]Actual reading achievement score minus predicted score.

TABLE 3C

Teacher Difference Scores I-IV on the Likelihood-of-Achievement Dimension and Class Achievement Measures

(N=18)

Teacher Difference Score I-IV	Teacher		Relative Gain Scores in Reading[a]			Grade in Reading			Grade in English		
	Number	Group	Pupil N	$\bar{x}$	SD	Pupil N	$\bar{x}$	SD	Pupil N	$\bar{x}$	SD
0	2	I	5	-.34	0.58	15	2.67	0.49	15	2.80	0.68
0	6	I	2	-.38	0.03	7	2.29	0.76	7	2.86	0.69
0	11	II	7	.01	0.53	17	2.65	0.79	17	2.53	0.80
0	12	II	11	.67	0.56	16	3.19	0.40	16	3.06	0.25
0	14	II	9	-.01	0.38	16	2.63	0.62	16	2.75	0.68
0	15	II	19	.30	0.69	23	3.00	0.30	23	3.09	0.29
0	16	II	16	-.06	0.67	19	2.90	0.46	19	3.00	0.33
2	5	I	3	-.80	0.34	6	3.00	0.63	6	2.50	1.05
2	7	I	2	-.61	0.34	5	2.20	0.45	5	2.20	0.84
2	13	II	10	-.11	0.53	17	2.65	0.70	17	2.88	0.86
2	18	II	0	0	0	20	3.25	0.72	19	3.37	0.68
4	1	I	5	-.27	0.43	11	2.64	0.67	11	2.73	0.91
4	3	I	11	-.33	0.43	15	2.47	0.83	15	2.53	0.83
5	8	I	2	-.16	0.52	11	2.46	0.52	11	1.91	0.54
5	17	II	20	.06	0.77	21	2.86	0.57	21	2.86	0.48
7	9	I	4	.09	1.16	4	3.00	0.82	4	3.00	1.41
7	10	II	1	-.48	0	8	2.25	0.46	8	2.13	0.64
11	4	I	4	-.32	0.41	7	2.57	0.79	7	2.14	0.90

[a]Actual reading achievement score minus predicted score.

Table 4 presents relationships between these scores, i.e., between teacher attitude and pupil achievement. A Pygmalion effect would, of course, be suggested by a negative correlation between a teacher's difference score and the mean achievement of his pupils (i.e., the greater the teacher's preference for Guise I, the lower the pupils' achievement). A significant negative correlation between achievement measures and difference scores I-IV would especially be indicative of a Pygmalion effect, since code-switching (Guise IV) is the characteristic speech behavior of the pupils. All the correlations between the three pupil achievement measures and difference score I-IV are indeed negative, but only one of them (I-IV and grade in English; r= -.50) reaches the .05 level of significance. This single result, however, gives a rather clear indication that the teachers' negative attitudes toward code-switching (and corresponding strongly positive attitudes toward standard English) generate low assessments of their pupils' language abilities and performance and lead to low grades in English.

TABLE 4

Correlations between Mean Teacher Difference Scores on Likelihood of Achievement and Class Achievement Measure

Source of Teacher Difference Scores[a]	Relative Gain Score in Reading (N=17 teachers)	Grade in Reading (N=18 teachers)	Grade in English (N=18 teachers)
I-II	.01	-.16	-.33
I-III	.08	.03	-.05
I-IV	-.24	-.21	-.50*

*$p < .05$

[a]Pretest scores were used for Group I teachers.

The relation between difference score I-IV and the relative gain score in reading--an objective measure rather than a possibly subjective grade assigned by a teacher--we thought might be especially revealing, and we therefore examined it further. An analysis of variance indicated that the teachers' difference scores did indeed contribute significantly to the variance in pupil scores (see Table 5).

TABLE 5

Summary of Analysis of Variance for Mean Teacher Difference Score I-IV as a Source of Variance in Students' Relative Gain Scores in Reading

Source	Sum of Squares	df	Mean Square	F
Between Groups	4.87	5	9.97	2.30*
Within Groups	53.02	125	0.42	
Total	57.89	130		

*$p < .05$

Significance in variance by itself does not prove that the relation between teacher attitudes and pupil gains in reading lies in the hypothesized direction. In order to investigate the latter possibility we grouped the pupils according to their teachers' difference scores on likelihood to achieve and calculated the mean relative reading gain scores of these pupil groups (see Tables 6A and 6B). Table 6B shows that the pupils taught by the teachers with a I-IV difference score of zero--the teachers totally "unprejudiced" against code-switching (pupil group 1)--have by far the highest positive relative reading gain score (0.14). Table 6C shows the significance of the difference between the mean scores of pupils whose teachers were not prejudiced against code-switching (pupil group 1) and the scores of pupils whose teachers were prejudiced in some degree. The values of all the differences are, of course, positive. Not all are significant. Interestingly, the two most significant

TABLE 6A

Pupil Groups Arranged According to Teachers' I-IV Difference Scores on the Likelihood-of-Achievement Dimension

Pupil Group	Teacher Difference Score I-IV
1 (N=69)	0 (N=7)
2 (N=15)	2 (N=4)
3 (N=16)	4 (N=2)
4 (N=22)	5 (N=2)
5 (N= 5)	7 (N=2)
6 (N= 4)	11 (N=1)

TABLE 6B

Mean Scores and Standard Deviations for Mean Relative Reading Gains of Pupil Groups

Pupil Group	Mean Relative Gain Score in Reading	Standard Deviation
1	0.14	0.66
2	-0.33	0.55
3	-0.31	0.41
4	0.04	0.74
5	-0.03	1.03
6	-0.33	0.41

differences are between the pupils of the zero-difference-score teachers and those of teachers with the two next smallest difference scores. In other words, the relation between teacher attitudes and pupil achievement is evidently not linear and is thus not fully captured by the correlational analysis used in Table 4. Yet the difference in relative gain scores achieved by pupils of zero-difference-score teachers and all others is clearly significant ($p = .04$, see Table 6C).

TABLE 6C

Significance of Difference in Mean Relative Reading Gains between Pupil Groups Arranged by Teachers' I-IV Difference Scores

Pupil Group Differences	Value of Difference	Standard Error	T Value	df	T Probability
Group 1-2	0.46	0.16	2.82	23.9	0.01
Group 1-3	0.45	0.13	3.45	35.4	0.00
Group 1-4	0.10	0.18	0.59	32.6	0.56
Group 1-5	0.16	0.47	0.35	4.2	0.74
Group 1-6	0.47	0.22	2.10	4.0	0.10
Group 1 minus all other groups	0.33	0.14	2.39	8.4	0.04

In discussing the relationship between teacher attitudes, as measured by difference scores, and pupil achievement, as measured by relative reading gains, we must note that the smaller difference scores tend to be found among Group II teachers, i.e., those in the Title I program and not in the workshop. Table 3C (p. 17) shows that among the seven teachers with zero I-IV difference scores five belong to Group II and that the most impressive relative gains in reading were made by the pupils of a Group II teacher. In other words, the effects of attitude and of the workshop treatment appear to be inextricably confounded with those of a special program in which the teachers in Group II participated. It would be impossible to decide what the causal relations between teacher attitude, the special program, and the greater pupil gain scores might be; our statistics can only document a strong relation among them.

Pupil Attitudes and Achievement

To examine the relation of pupil attitudes to pupil achievement, we did a correlation analysis of pupil difference scores on the likelihood-of-achievement attitude dimension and pupil achievement measures (see Table 7). The difference scores comparing Guise I (standard English) and

TABLE 7

Correlations of Pupil Difference Scores on the Likelihood-of-Achievement Dimension with Pupil Achievement Measures

Source of Pupil Difference Scores	Relative Gains in Reading (N=35)	Grade in Reading (N=73)	Grade in English (N=73)	Spanish Multiple Choice (N=67)	English Multiple Choice (N=68)	Spanish Production (N=17)	English Production (N=23)
I-II	.13	-.05	.09	.03	.24*	.33	-.04
I-III	.20	.26**	.14	.04	.25*	.23	.09
I-IV	.38**	.12	.17	.13	.22*	.02	.17
I-VII	.05	-.04	-.16	-.11	-.12	.00	.11

*p < .05

**p < .01

guises II, III, and IV (all "nonstandard" varieties) all have a significant positive relation to the pupils' performance on the Grammar Multiple-Choice Test in English. This relation is not surprising, since to some extent the evaluation of the nonstandard guises and the multiple-choice test involve overlapping or similar tasks, that is, the recognition of standard as opposed to nonstandard English speech. The positive correlation between the grade in reading and the pupil difference score I-III can be explained in much the same way: both the reading grade and the evaluation of different guises are likely to involve an ability to distinguish between standard and nonstandard speech varieties. Somewhat surprisingly, all the achievement measures are positively related to the degree to which pupils downgrade code-switching compared to standard English (I-IV), though only two correlations are significant. These findings suggest that pupils' grades and actual reading achievement may have some relation to the congruence of pupils' attitudes with teachers' attitudes.

Conclusions

The important results of this investigation may be summarized as follows:

1. Teachers and pupils have well-defined and largely similar attitudes toward specific speech varieties found in a Spanish/English bilingual environment. Teachers and pupils agree in rating standard English higher than nonstandard speech varieties on correctness, appropriateness, and likelihood of achievement in school; and most teachers agree with pupils in rating standard English significantly higher than code-switching. After the workshop, the participants (Group I teachers) tended to rate code-switching even lower than heavily hispanized English (Guise III). However, another group of teachers involved in a year-long special program did not share this judgment, and ranked code-switching higher than hispanized English on likelihood of achievement and even went so far as not to rank the achievement potential of code-switchers significantly lower than that of speakers of standard English.

2. The workshop conducted for Group I teachers apparently did not bring about changes in attitude in the desired direction. Indeed, attitudinal change may have taken place in the opposite direction. Although the workshop presentation stressed, among other sociolinguistic facts, the naturalness of code-switching as a legitimate and expressive form of communication among bilinguals, post-workshop attitude measures seem to indicate a further deterioration of teacher attitudes toward code-switching, compared to other nonstandard speech varieties. The results suggest that relatively short in-service workshops may be an unsuitable vehicle for bringing about predictable attitudinal change on the part of teachers.

3. Bilingual pupils' language attitudes have some relation to their achievement in reading and English. Their ranking the achievement potential of speakers of standard English higher than that of speakers of nonstandard varieties, including code-switching, has a positive relation to their achievement.

4. There is some evidence that teachers' attitudes regarding the likelihood of success of code-switching bilingual pupils are directly related to pupils' grades as well as to their relative reading gains as shown by an objective test. Teachers who rated standard English much higher than code-switching had pupils whose relative gains in reading proficiency were lower than expected. It is difficult, however, to disentangle the possible negative results of the Pygmalion effect from the positive effect that may have been brought about by the special program in which some teachers participated.

The next step in research may not be further documentation of the self-fulfilling prophecy, but a detailed study of specific teaching behaviors as well as specific characteristics of pupils that mediate between the teacher's attitude and the achievement of the pupils (cf. Alpert, 1975; Dusek, 1975). Only investigating the dynamics and importance of teacher-pupil interactions in the classroom and their effects on pupils' learning will tell us how to plan the kind of intervention that will result in maximum benefit to the pupil.

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APPENDIX A

Sample Scripts for Seven Guises

Guise I Standard English

Ann is thirteen years old. She likes to play with her brother Richard who is eight years old. Ann's mother brought her a red shawl for her birthday. When Ann was going to put her shawl on, she couldn't find it because Richard had hidden it under some boxes. Ann was very angry, but her mother told her not to be upset because her brother was only playing a game.

Guise II Standard English with Phonological and Morphological Deviations

Ann is thirteen years old. She likes to play with her brother Richard who is eight years old. Ann's mother bring her a red shawl for her birthday. When Ann was going to put on her shawl she couldn't find it because Richard had hidden it under some boxes. Ann is very angry, but her mother told her not to be upset because her brother was only playing a game.

Guise III Standard English with Phonological, Morphological, and Syntactic Deviations

Ann thirteen year old. She likes to play with her brother Richard who is eight year old. Ann's mother bring her a red shawl for her birthday. When Ann was going to put on his shawl, she no could find it because had hidden it under some box. Ann is very angry, but her mother told her to be no upset because her brother was only playing a game.

Guise IV English/Spanish Code Alternation

Ana tiene thirteen years. She likes to play con su hermano Richard que tiene eight years. Ana's mother le trajo un red shawl para su birthday. When Ana se fue a poner su shawl, she couldn't find it porque Richard lo había escondido under some boxes. Ana was very angry, pero su madre le dijo not to be upset porque su hermano was only playing a game.

Guise V Standard Spanish with Phonological, Morphological, and Syntactic Deviations

Ana tene trece años. A e'a le gusta jugar con su hermano Ricardo, quien tene ocho años. L'amá de Ana le trujo a e'a un rojo rebozo para su cumpleaños. Cuando Ana se jue a poner su rebozo, no lo pudo encontrar porque Ricardo lo había escondido debajo de una cajas. Ana estaba furiosa, pero su 'amá le dijo que no se enojara porque su hermano sólo estaba jugando.

Guise VI Standard Spanish with Phonological and Morphological Deviations

Ana tene trece años. A e'a le gusta jugar con su hermano Ricardo quien tene ocho años. La 'amá de Ana le trujo a e'a un rebozo rojo para su cumpleaños. Cuando Ana se jue a poner el rebozo, no lo pudo encontrar porque Ricardo lo había escondido debajo de unas cajas. Ana estaba furiosa, pero su 'amá le dijo que no se enojara porque su hermano sólo estaba jugando.

Guise VII Standard Spanish

Ana tiene trece años. A ella le gusta jugar con su hermano Ricardo quien tiene ocho años. La madre de Ana le trajo a ella un rebozo rojo para su cumpleaños. Cuando Ana se fue a poner el rebozo, no lo pudo encontrar porque Ricardo lo había escondido debajo de unas cajas. Ana estaba furiosa, pero su madre le dijo que no se enojara porque su hermano sólo estaba jugando.

APPENDIX B

Sample Items from the SCRDT Spanish/English Balance Tests

Spanish Grammar Production Test

Category II-Plural to Singular/Del Plural al Singular

6. Las niñas están haciendo su tarea.

La niña está haciendo su tarea.

English Grammar Production Test

Category II-Plural to Singular/Del Plural al Singular

6. The girls are doing their homework.

The girl is doing her homework.

Spanish Grammar Multiple-Choice Test

Category I-Singular to Plural/Del Singular al Plural

1. Esta mujer está escribiendo.

Estas mujeres
A. está escribiendo.
B. están escribiendo.
C. está escrito.

English Grammar Multiple-Choice Test

Category I-Singular to Plural/Del Singular al Plural

1. This woman is writing.

These women
A. are writing.
B. written.
C. are written.

APPENDIX C

T-Tests of Teachers' Significant Mean Score Differences by Attitude Dimension

C.1. Correctness Dimension, Group I, Pretest (N=9)

Difference Variable	Difference Mean	SD	T	df
I - II	6.33	3.16	6.01***	8
I - III	6.67	3.39	5.90***	8
I - IV	7.22	4.15	5.23***	8

*** $p < .001$

C.2. Correctness Dimension, Group I, Posttest (N=9)

Difference Variable	Difference Mean	SD	T	df
I - II	5.44	2.79	5.86***	8
I - III	6.00	3.04	5.92***	8
I - IV	7.89	3.95	5.99***	8
II - IV	2.44	1.42	5.15***	8
III - IV	1.89	1.69	3.35**	8

** $p < .01$ *** $p < .001$

C.3. Appropriateness-for-School Dimension Group I, Pretest (N=9)

Difference Variable	Difference Mean	SD	T	df
I - II	6.00	2.83	6.36***	8
I - III	7.22	2.91	7.46***	8
I - IV	8.00	3.61	6.66***	8
II - III	1.22	0.83	4.40**	8
II - IV	2.00	2.24	2.68*	8

* $p < .05$ ** $p < .01$ *** $p < .001$

C.4. Appropriateness-for-School Dimension
Group I, Posttest (N=9)

Difference Variable	Difference Mean	SD	T	df
I - II	5.67	2.60	6.54***	8
I - III	6.00	2.74	6.57***	8
I - IV	7.89	4.11	5.76**	8
II - IV	2.22	1.86	3.59*	8
III - IV	1.89	1.97	2.88	8

*p < .05 **p < .01 ***p < .001

C.5. Likelihood-of-Achievement Dimension
Group I, Pretest (N=9)

Difference Variable	Difference Mean	SD	T	df
I - II	2.89	2.32	3.74**	8
I - III	3.00	2.78	3.23**	8
I - IV	3.89	3.52	3.32**	8

**p <.01

C.6. Likelihood-of-Achievement Dimension
Group I, Posttest (N=9)

Difference Variable	Difference Mean	SD	T	df
I - II	2.56	2.24	3.42**	8
I - III	3.33	2.45	4.08**	8
I - IV	4.33	3.04	4.27**	8
II - IV	1.78	1.48	2.12	8

**p < .01

C.7. Correctness Dimension, Group II, (N=9)

Difference Variable	Difference Mean	SD	T	df
I - II	5.44	1.51	10.82***	8
I - III	6.67	2.00	10.00***	8
I - IV	5.89	3.41	5.18***	8
II - III	1.22	1.20	3.05**	8

** $p < .01$ *** $p < .001$

C.8. Appropriateness-for-School Dimension
Group II, (N=9)

Difference Variable	Difference Mean	SD	T	df
I - II	5.78	2.49	6.96***	8
I - III	7.11	3.10	6.88***	8
I - IV	7.11	3.33	6.40***	8
II - III	1.33	1.23	3.27**	8

** $p < .01$ *** $p < .001$

C.9. Likelihood-of-Achievement Dimension
Group II, (N=9)

Difference Variable	Difference Mean	SD	T	df
I - II	2.11	2.32	2.74*	8
I - III	3.67	3.28	3.35**	8
II - III	1.56	1.42	3.28**	8
III - IV	-2.33	2.06	-3.40**	8

* $p < .05$ ** $p < .01$

APPENDIX D

T-Tests of Pupils' Significant Mean Score Differences by Attitude Dimension

D.1. Correctness Dimension

(N=74)

Difference Variable	Difference Mean	SD	T	df
I - II	5.82	3.09	16.24***	73
I - III	5.88	2.91	17.35***	73
I - IV	3.92	3.64	9.25***	73
II - IV	-1.91	2.90	-5.65***	73
II - VII	-6.09	3.04	-17.28***	73
III - IV	-1.96	3.07	-5.50***	73
III - VII	-6.15	2.71	-19.49***	73
IV - VII	-4.19	3.53	-10.21***	73

*** $p < .001$

D.2. Appropriateness-for-School Dimension

(N=74)

Difference Variable	Difference Mean	SD	T	df
I - II	6.35	3.20	17.08***	73
I - III	6.05	3.20	16.29***	73
I - IV	4.92	3.47	12.20***	73
I - VII	1.53	3.68	3.57***	73
II - IV	-1.43	3.05	-4.04***	73
II - VII	-4.82	4.06	-10.22**	73
III - IV	-1.14	3.20	-3.05***	73
III - VII	-4.53	3.66	-10.64***	73
IV - VII	-3.39	4.03	-7.25***	73

** $p < .01$

*** $p < .001$

D.3. Likelihood-of-Achievement Dimension

(N=74)

Difference Variable	Difference Mean	SD	T	df
I - II	5.73	2.97	16.59***	73
I - III	7.43	2.62	17.85***	73
I - IV	3.99	2.98	11.50***	73
II - IV	-1.74	3.10	-4.84***	73
II - VII	-5.45	3.73	-12.57***	73
III - IV	-1.45	2.48	-5.02***	73
III - VII	-5.15	3.52	-12.58***	73
IV - VII	-3.70	3.81	-8.37***	73

*** $p < .001$